Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

1.(Currently Amended) A method for restoring a three-dimensional image representing the surface contours of at least one object, based on at least one two-dimensional X-ray ~~view~~ projection of this object, the method comprising the steps of:

> determining the position of the shooting source in a reference referential system;

> selecting at least one statistical model defining an average shape of the object and its main deformations with respect to this average shape, the statistical model being calculated from an object population of a same type for which the statistical correspondence common to all objects is searched; and

> ~~iteratively, until the contours of the model are such that the intervals between back-projection rays of the image contours in two-dimensions from the source and the model surface are minimum, to obtain a correspondence between the model and the image:~~

> selecting an orientation and a position of the model in the reference referential system by submitting the statistical model, successively, to a rigid transformation modifying its position and/or its orientation, then

> selecting a deformation of the model to modify its contours in three dimensions, by submitting the statistical model to a non-rigid deformation modifying its surface contours,

> wherein the orientation and deformation selecting steps are performed iteratively, until the contours of the model are such that the intervals between back-projection rays of the image contours in two dimensions from the source and the model surface are minimum, in order to obtain a correspondence between the model and the image.

2.(Cancelled)

3.(Cancelled)

4.(Previously Presented) The method of claim 1, wherein the image contours in two dimensions are automatically obtained by projecting the model in the image plane in two dimensions, and by

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deforming the projected contours to have them coincide with the points of strong gray level gradient of the two-dimensional image.

5.(Previously Presented) The method of claim 4, wherein the automatic determination of the image contours in two dimensions is performed iteratively, each iteration being interposed between two successive iterations of the selection steps.

6.(Previously Presented) The method of claim 1, further comprising the step of determining three-dimensional coordinates of points of the object in the reference referential system, to have additional reference points for the iterative position, orientation, and deformation selection steps.

7.(Previously Presented) The method of claim 1, further comprising the steps of using several two-dimensional images for which the respective positions of the shooting source are all determined in the reference referential system, and performing the iterative selection steps while taking account of the back-projection rays of the contours of all the two-dimensional images.

8.(Previously Presented) The method of claim 7, wherein the number of used images is a function of the desired accuracy.

9.(Previously Presented) The method of claim 1, wherein the model surface is formed of triangle elements, said intervals being measured with respect to points of given edges forming generators of the three-dimensional contour.

10.(Previously Presented) The method of claim 1, wherein the method is applied to the restoring of the surface contours of several objects linked together by rigid and/or resilient transformation relations.

11.(Previously Presented) The method of claim 1, wherein the method is applied to the restoring of bone images.

12.(Previously Presented) An image processing system comprising means for implementing the method of claim 1.

13.(Currently Amended) The method of claim ~~2~~ 1, wherein the image contours in two dimensions are automatically obtained by projecting the model in the image plane in two dimensions, and by deforming the projected contours to have them coincide with the points of strong gray level gradient of the two-dimensional image.

14.(Canceled)

15.(Currently Amended) The method of claim ~~2~~ 1, further comprising the step of determining three-dimensional coordinates of points of the object in the reference referential system, to have additional reference points for the iterative position, orientation, and deformation selection steps.

16.(Canceled)

17.(Currently Amended) The method of claim ~~2~~ 1, further comprising the steps of using several two-dimensional images for which the respective positions of the shooting source are all determined in the reference referential system, and performing the iterative selection steps while taking account of the back-projection rays of the contours of all the two-dimensional images.

18.(Canceled)

19.(Currently Amended) The method of claim ~~2~~ 1, wherein the model surface is formed of triangle elements, said intervals being measured with respect to points of given edges forming generators of the three-dimensional contour.

20.(Canceled)

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